1. **Title of the module**

MACT9520 Financial Modelling

1. **School or partner institution which will be responsible for management of the module**

SMSAS

1. **The level of the module (Level 4, Level 5, Level 6 or Level 7)**

Level 7

1. **The number of credits and the ECTS value which the module represents**

15 credits (7.5 ECTS)

1. **Which term(s) the module is to be taught in (or other teaching pattern)**

Spring and/or Summer Term.

1. **Prerequisite and co-requisite modules**

None.

1. **The programmes of study to which the module contributes**

MSc in Applied Actuarial Science also with an Industrial Placement and International Masters

1. **The intended subject specific learning outcomes.  
   On successfully completing the module students will be able to:**

8.1 demonstrate a systematic understanding of the principles of specific actuarial mathematics techniques,

8.2 prepare, analyse and summarise raw data,

8.3 develop, systematically and creatively, actuarial models to solve actuarial problems,

8.4 apply, interpret and communicate the method, assumptions and results of the models derived in 8.3,

8.5 evaluate critically approaches to financial modelling and documentation.

1. **The intended generic learning outcomes.  
   On successfully completing the module students will be able to:**

9.1 exercise initiative and decision making in complex and unpredictable situations, using a logical mathematical approach to solving problems,

9.2 communicate effectively, both orally and in writing, at a level appropriate to the audience,

9.3 use appropriate information technology,

9.4 work effectively, both independently and in groups, planning and implementing tasks at a professional level.

1. **A synopsis of the curriculum**

The curriculum is intended to be consistent with that of the Institute and Faculty of Actuaries professional subject CP2.

Students will be given training to use Microsoft Word, Excel and PowerPoint to a level that is needed for the module (some familiarity with the packages is assumed).

The curriculum provides an introduction to, and development of, practical modelling techniques including the need for appropriate documentation, with a series of exercises to develop skills in applying techniques. Exercises are completed and discussed in class, along with the methods and principles of financial modelling and documentation.

1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**

This is primarily a practical module. The majority of the reading will be provided by specific lecture notes.

1. **Learning and teaching methods**

This module will be taught by means of 36 contact hours, made up of approximately 6 hours of lectures, and 30 hours of computer classes, including exercises, demonstrations and discussions.

Contact hours: 36

Private Study hours 114

Total study hours 150

1. **Assessment methods**
   1. Main assessment methods

This module will be assessed by:

10% Critical marking exercise (with commentary) - time-limited lab-based computer test  
 (90 minutes)

50% Excel model and Audit Trail documentation - time-limited lab-based computer test   
 (3.5 hours)

40% Summary and critical commentary - time-limited lab-based computer test   
 (3.5 hours)

13.2 Reassessment methods

Like-for-like.

1. ***Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section12) and methods of assessment (section 13)***

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** |  | *8.1* | *8.2* | *8.3* | *8.4* | *8.5* | *9.1* | *9.2* | *9.3* | *9.4* |
| **Learning/ teaching method** | **Hours allocated** |  |  |  |  |  |  |  |  |  |
| **Lecture** | 6 | **x** | **x** |  |  | **x** | **x** | **x** | **x** |  |
| **Computer Classes** | 30 | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| **Private Study** | 114 | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |
| Critical marking exercise |  | **x** |  |  |  | **x** |  | **x** | **x** | **x** |
| Model & Audit Trail |  | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Summary & Commentary |  | **x** |  |  | **x** | **x** |  | **x** | **x** | **x** |

1. **Inclusive module design**

The School recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

1. **Campus(es) or centre(s) where module will be delivered**

Canterbury

1. **Internationalisation**

Actuarial Science is an international subject with techniques developed and refined by actuaries, mathematicians and statisticians across the globe. The subject-specific learning outcomes (section 8) have been developed with a focus on application in the commercial and professional environment, and mastery of these will equip students to apply the techniques of this module in a wide range of international contexts. The module team is drawn from the School of Mathematics, Statistics and Actuarial Science, which includes many members of staff with international experience of teaching and research.

Examples with an international dimension are included in the module where appropriate.

The support SMSAS provides to its students is also internationally attuned given our international student body.

**FACULTIES SUPPORT OFFICE USE ONLY**

**Revision record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date approved | Major/minor revision | Start date of the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
| 23/01/2019 | Minor | September 2019 | 13 |  |
|  |  |  |  |  |